

REMARKS

Claims 1, 2, 5-9, 11, 12 and 15-19 are pending in this application. By this Amendment, claims 10 and 20 are canceled without prejudice to or disclaimer of the subject matter contained therein, and claims 1 and 11 are amended. Support for the amendments to claims 1 and 11 is found in, at least, paragraphs [0044], [0052], and [0053] of the specification. No new matter is added by these amendments.

The August 9, 2005, Office Action rejected claims 1, 2 and 5-20 under 35 U.S.C. §103(a) over U.S. Patent 5,863,105 to Sano in view of U.S. Patent 5,636,909 to Hirao *et al.* (Hirao). The rejection is rendered moot with respect to claims 10 and 20, and is respectfully traversed with respect to the remaining claims.

Sano and Hirao do not teach or suggest a brake system for a vehicle, comprising a brake apparatus that applies braking force to each wheel of the vehicle, and a controller that controls the braking force applied to the wheel by controlling the brake apparatus so that an actual slip rate of the wheel matches a target slip rate, wherein the controller is adapted to: during a specific brake control mode in which the target slip rate is set so as to prevent the actual slip rate of the wheel from exceeding a reference value and therefore avoid locking the wheel, make a first correction to the target slip rate set in the brake control mode such that the actual yaw rate of the vehicle matches a target yaw rate, and ensure through an adjustment of the target slip rate, a provision of a greater longitudinal force on the wheel than that obtained with the target slip rate determined or would have been determined by the first correction if a reduction in braking force of the vehicle is expected, wherein the controller is further adapted to bring about the adjustment of the target slip rate by increasing the target slip rate determined by the first correction or by prohibiting the first correction, and the controller is further adapted to control a value of time quadrature of a fluid pressure that is applied to the

brake apparatus in proportion to a deviation of the actual slip rate from the target slip rate, as recited in claim 1.

Nor do Sano and Hirao teach or suggest a method of controlling a brake apparatus for applying braking force to wheels of a vehicle, the method comprising controlling the braking force applied from the brake apparatus to each wheel when an actual slip rate of the wheel has exceeded a reference value so that the actual slip rate matches a target slip rate and the wheel is thereby prevented from being locked, making a first correction to the target slip rate so that an actual yaw rate of the vehicle matches a target yaw rate, and ensuring through an adjustment of the target slip rate, a provision of a greater longitudinal force on the wheel than obtained with the target slip rate determined or would have been determined by the first correction if a reduction in braking force of the vehicle is expected, wherein the adjustment of the target slip rate is brought about by increasing the target slip rate determined by the first correction or by prohibiting the first correction, and a value of time quadrature of a fluid pressure that is applied to the brake apparatus is controlled in proportion to a deviation of the actual slip rate from the target slip rate, as recited in claim 11.

Both Sano and Hirao are directed to control apparatuses primarily concerned with turns. As Sano notes in the Abstract, it computes a correction amount for a target slip ratio of a target wheel to be controlled based upon a required yaw moment of the vehicle in a situation where an antiskid braking system should be activated. The August 9, 2005, mailed Office Action refers to cols. 1, 2 and 13-19 in particular of Sano. That discussion, particularly beginning in col. 12 through col. 19 and beyond deals with turn determination and yaw moment control for a vehicle. In particular, in col. 21 there is a table of how braking to various wheels is controlled or not controlled based upon the status of the turn.

Beginning in col. 27, Sano notes that there must be some cooperative control when an anti-brake system is then executed. In particular, Sano says cooperative control with a brake

pressure control by the ABS is executed next (col. 27, lines 39-41). That is, first Sano determines the amount of turn and yaw effects to prevent understeering or oversteering and then layers on the action of an ABS. Applicants' claimed invention, on the other hand, is directed to a brake apparatus that applies a braking force to each wheel by setting a target slip rate so as to prevent the actual slip rate of the wheel from exceeding a reference value and therefore avoid locking the wheel but then makes a first correction to that slip rate such that an actual yaw rate of the vehicle matches a target yaw rate. Doing so ensures, through an adjustment of the target slip rate, provision of a greater longitudinal force on the wheel than that obtained with the target slip rate determined or would have been determined by the first correction if a reduction in braking force of the vehicle is expected, wherein the controller is adapted to bring about the adjustment of the target slip rate by adjusting the target slip rate determined by the first correction or by prohibiting the first correction and a value of time quadrature of a fluid pressure that is applied to the brake apparatus is controlled in proportion to a deviation of the actual slip rate from the target slip rate. The time quadrature of the fluid pressure is discussed in, for example, paragraphs [0057], [0058], [0060] and [0061]. Thus, Applicants' invention is directed firstly to an ABS control mode that then adjusts the ABS based upon turn conditions as appropriate. Conversely, Sano is directed to determining control in turns and then adjusts that control based upon the application of an ABS, the manners of operation being opposite to one another.

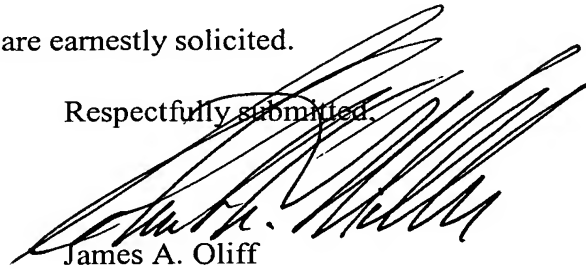
Hirao does not address an ABS system. Hirao is solely concerned with a traction control system for a vehicle when making a turn. The control can be by engine control, brake control or a combination.

There is no reason to combine the two references and there is nothing in the two references together that would suggest their combination. Thus, the applied references do not suggest the subject matter of the brake apparatus of claim 1 nor of the method of controlling a

brake apparatus as found in claim 11. Further, for all the reasons discussed above with respect to claims 1 and 11, and for the additional features recited therein, the applied references do not suggest the subject matter of claims 2 and 5-9 depending from claim 1 and claims 12 and 15-19 depending from claim 11. Therefore, it is respectfully requested the rejection be withdrawn.

In view of the foregoing amendments and remarks, Applicants respectfully submit that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1, 2, 5-9, 11, 12 and 15-19 are earnestly solicited.

Respectfully submitted,



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